

## WHAT IS CLAIMED IS:

1. An information processing apparatus comprising:

5 a manipulation procedure database in which manipulation procedures selectable by a user are described hierarchically;

judging unit which judges a manipulation procedure selected by the user;

10 first voice output unit which, in the case in which a manipulation procedure of a hierarchy lower in order than said manipulation procedure judged by said judging unit exists, outputs voice information on said manipulation procedure of the lower hierarchy;

15 transition unit with which, in the case in which a manipulation procedure of a hierarchy lower in order than said manipulation procedure judged by said judging unit does not exist, a manipulation transitions to a manipulation procedure of a top hierarchy which is different from a manipulation procedure of a top hierarchy of said manipulation procedure; and

20 second voice output unit which outputs voice information on said manipulation procedure of the top hierarchy to which the manipulation has transitioned.

2. The information processing apparatus according to claim 1, further comprising re-selection unit which, 25 in a hierarchy in which the user has selected a

manipulation procedure, re-selects a manipulation procedure in the hierarchy.

3. The information processing apparatus according to claim 1, further comprising default setting unit  
5 which, in the case in which the manipulation transitions to a higher hierarchy without selecting any manipulation procedure in a predetermined hierarchy, sets a default manipulation procedure in the  
predetermined hierarchy.

10 4. The information processing apparatus according to claim 1, further comprising voice re-output unit which, during voice output of voice information on said manipulation procedure, outputs voice again from voice information on a manipulation procedure immediately  
15 before said manipulation procedure for which voice information is being outputted presently.

5. The information processing apparatus according to claim 1, further comprising state transition unit which, during voice output of voice information on said  
20 manipulation procedure, stops the voice output of the voice information to return said manipulation procedure to a state immediately before the voice output.

6. The information processing apparatus according to claim 1,  
25 wherein, in the case in which an instruction to transition to a higher hierarchy is issued during voice output of voice information on said manipulation

procedure, the information processing apparatus stops the voice output of the voice information and sets a default manipulation procedure to transition to the higher hierarchy.

5           7. An information processing apparatus comprising:

          a manipulation procedure database in which manipulation procedures selectable by a user are described hierarchically;

10           voice output unit which outputs information on a manipulation procedure selectable by the user as voice;

          judging unit which judges a manipulation procedure selected by the user while said voice output unit is outputting voice;

15           transition unit with which, in the case in which a manipulation procedure of a hierarchy lower in order than said manipulation procedure judged by said judging unit exists, a manipulation transitions to the lower hierarchy; and

20           default setting unit which sets a default manipulation procedure in a predetermined hierarchy.

          8. The information processing apparatus according to claim 7,

          wherein, in the case in which a default  
25   manipulation procedure is selected in a top hierarchy, said default setting unit sets manipulation procedures

in all hierarchies to the default manipulation procedure.

9. The information processing apparatus according to claim 7, further comprising deciding unit which  
5 decides said manipulation procedure,

wherein, in the case in which said manipulation procedure is decided without outputting voice information on said manipulation procedure in a predetermined hierarchy, said default setting unit sets  
10 a default manipulation procedure in the hierarchy, and the transition unit returns the hierarchy to a hierarchy immediately higher in order than the hierarchy.

10. The information processing apparatus  
15 according to claim 7,

wherein, in the case in which an instruction to transition to a different hierarchy is issued during output of voice information on a manipulation procedure in a predetermined hierarchy, said voice output unit  
20 skips said manipulation procedure, for which voice is being outputted presently, and outputs voice information on a manipulation procedure of the different hierarchy as voice and, in the case in which an instruction to return to a preceding manipulation  
25 procedure is issued during output of voice information on said manipulation procedure in the predetermined hierarchy, said voice output unit outputs voice again

from voice information on a manipulation procedure immediately preceding said manipulation procedure for which voice is being outputted presently.

11. The information processing apparatus  
5 according to claim 1,

wherein voice information on said manipulation procedure is a manipulation procedure name selectable by the user.

12. The information processing apparatus  
10 according to claim 1, further comprising: a plurality buttons which are associated with different manipulation procedures, respectively, and correspond to a plurality of fingers of the user; and reception unit which receives information on which of said  
15 plurality of buttons is depressed by the user,

wherein said judging unit judges a manipulation procedure corresponding to the depressed button for which information is received by said reception unit.

13. The information processing apparatus  
20 according to claim 12,

wherein said plurality of buttons can be operated with positions of the plurality of fingers fixed, respectively.

14. The information processing apparatus  
25 according to claim 12,

wherein said plurality of buttons are allocated to a part of a ten key.

15. The information processing apparatus  
according to claim 1,

wherein said predetermined processing apparatus is  
a copying machine and said manipulation procedure is a  
5 setting function for a copying manipulation selectable  
by the user in the copying machine.

16. The information processing apparatus  
according to claim 1,

wherein voice information on said manipulation  
10 procedure in a predetermined hierarchy is outputted  
repeatedly as voice until selection of said  
manipulation procedure and transition of a hierarchy is  
performed.

17. An information processing method in an  
15 information processing apparatus which is connectable  
to a manipulation procedure database in which  
manipulation procedures selectable by a user are  
described hierarchically, said information processing  
method comprising:

20 a judgment step of judging a manipulation  
procedure selected by the user;

a first voice output step of, in the case in which  
a manipulation procedure of a hierarchy lower in order  
than said manipulation procedure judged in said  
25 judgment step exists, outputting voice information on  
said manipulation procedure of the lower hierarchy;

a transition step with which, in the case in which  
a manipulation procedure of a hierarchy lower in order  
than said manipulation procedure judged in said  
judgment step does not exist, a manipulation  
5 transitions to a manipulation procedure of a top  
hierarchy which is different from a manipulation  
procedure of a top hierarchy of said manipulation  
procedure; and

a second voice output step of outputting voice  
10 information on said manipulation procedure of the top  
hierarchy to which the manipulation has transitioned.

18. An information processing method in an  
information processing apparatus which is connectable  
to a manipulation procedure database in which  
15 manipulation procedures selectable by a user are  
described hierarchically, said information processing  
method comprising:

a voice output step of outputting information on a  
manipulation procedure selectable by the user as voice;

20 a judgment step of judging a manipulation  
procedure selected by the user while said voice output  
unit is outputting voice;

a transition step with which, in the case in which  
a manipulation procedure of a hierarchy lower in order  
25 than said manipulation procedure judged in the judgment  
step exists, a manipulation transitions to the lower  
hierarchy; and

a default setting step of setting a default manipulation procedure in a predetermined hierarchy.

19. A program for causing a computer, which is connectable to a manipulation procedure database in which manipulation procedures selectable by a user are described hierarchically, to execute:

a judgment procedure which judges a manipulation procedure selected by the user;

a first voice output procedure which, in the case in which a manipulation procedure of a hierarchy lower in order than said manipulation procedure judged by said judgment procedure exists, outputs voice information on said manipulation procedure of the lower hierarchy;

15 a transition procedure with which, in the case in which a manipulation procedure of a hierarchy lower in order than said manipulation procedure judged by said judgment procedure does not exist, a manipulation transitions to a manipulation procedure of a top hierarchy which is different from a manipulation procedure of a top hierarchy of said manipulation procedure; and

20 a second voice output procedure which outputs voice information on said manipulation procedure of the top hierarchy to which the manipulation has transitioned.



20. A program for causing a computer, which is connectable to a manipulation procedure database in which manipulation procedures selectable by a user are described hierarchically, to execute:

5       a voice output procedure which outputs information on a manipulation procedure selectable by the user as voice;

          a judgment procedure which judges a manipulation procedure selected by the user while said voice output  
10   unit is outputting voice;

          a transition procedure with which, in the case in which a manipulation procedure of a hierarchy lower in order than said manipulation procedure judged in the judgment step exists, a manipulation transitions to the  
15   lower hierarchy; and

          a default setting procedure which sets a default manipulation procedure in a predetermined hierarchy.

21. A computer readable recording medium having stored therein the program according to claim 19.

20       22. A computer readable recording medium having stored therein the program according to claim 20.

23. An information processing apparatus comprising:

          a database in which manipulation procedures  
25   selectable by a user are described hierarchically;

          judging unit which judges a manipulation procedure selected by the user from said database; and

voice output unit which, in the case in which a manipulation procedure of a hierarchy lower in order than said manipulation procedure judged by said judging unit exists, outputs voice information on said manipulation procedure of the lower hierarchy.

24. An information processing method comprising:  
a judgment step of judging a manipulation procedure selected by a user from a database in which manipulation procedures selectable by the user are described hierarchically; and

a voice output step of, in the case in which a manipulation procedure of a hierarchy lower in order than said manipulation procedure judged by said judging unit exists, outputting voice information on said manipulation procedure of the lower hierarchy.

25. A program for causing a computer to execute:  
a judgment procedure which judges a manipulation procedure selected by a user from a database in which manipulation procedures selectable by the user are described hierarchically; and

a voice output procedure which, in the case in which a manipulation procedure of a hierarchy lower in order than said manipulation procedure judged by said judging unit exists, outputs voice information on said manipulation procedure of the lower hierarchy.

26. A computer readable recording medium having stored therein the program according to claim 25.